Joint Proposal
of
DIRECTV, EchoStar and Intelsat
for
BSS in the 17/24 GHz Band

March 14, 2007

The Parties to this Joint Proposal

- Four existing applicants for satellites in the 17/24 GHz BSS band at the time the NPRM was issued:
  - DIRECTV, EchoStar, Intelsat and Pegasus
- First three applicants in queue are party to this joint proposal
- Pegasus did not comment in this proceeding

Joint Proposal – Main Points

- Ten nominal orbital locations in the “CONUS arc”
- DIRECTV, EchoStar and Intelsat would each be authorized to operate two specific orbital slots in this CONUS arc consistent with applications on file with the Commission, as modified
- Orbital location modifications would be allowed to conform to proposed nominal orbital locations
- All other applications, including the remaining applications of the parties, would be dealt with by the licensing rules to be set by the FCC, consistent with the guidelines in this joint proposal
- Proposed methodology to provide for:
  - Licensee to adjust orbital position relative to nominal location in the CONUS arc
  - Licensee to obtain orbital slot outside of the CONUS arc
- Corresponding PFD limits, above which coordination with neighbors is required

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Orbital Locations – CONUS Arc

Nominal Orbital Location, °W	Operator	Nearby AP30/30A Region 2 BSS Assignment	Administration
81	OPEN	82 ± 0.2	CAN
85	OPEN		
89	Intelsat		
95	Intelsat	94/94.8	ARG, EQA
99	DIRECTV	99.2	PRG
103	DIRECTV	103.2/103.8	CLM, VEN
109.5	EchoStar	110 ± 0.2	
114.5	OPEN	115.2	VEN, PRU, EQA, CLM, BOL
119	EchoStar	119 ± 0.2	
124	OPEN		

Orbital Locations – Outside CONUS Arc

- Orbital locations must be at least 4 degrees from any nominal CONUS arc orbital location as specified in the CONUS Arc table
- Orbital locations must be at least 4 degrees from any other prior-licensed orbital position outside of the CONUS arc

- Above conditions (and those on previous chart) satisfy the differing requirements of the three first FCC applicants in the 17/24 GHz BSS band

PFD Coordination Triggers

- No coordination required with neighbors provided PFD in CONUS complies with the following:

Location in CONUS	**PFD Value (dBW/m^2/MHz)**
East of 100° West Longitude and South of 38° North Latitude	-115 + 13.9 - (29 - 25log(θ)) (= -130.1 + 25log(θ))
East of 100° West Longitude and North of 38° North Latitude	-118 + 13.9 - (29 - 25log(θ)) (= -133.1 + 25log(θ))
West of 100° West Longitude	-121 + 13.9 - (29 - 25log(θ)) (= -136.1 + 25log(θ))

θ = angular separation from closest nominal orbital position

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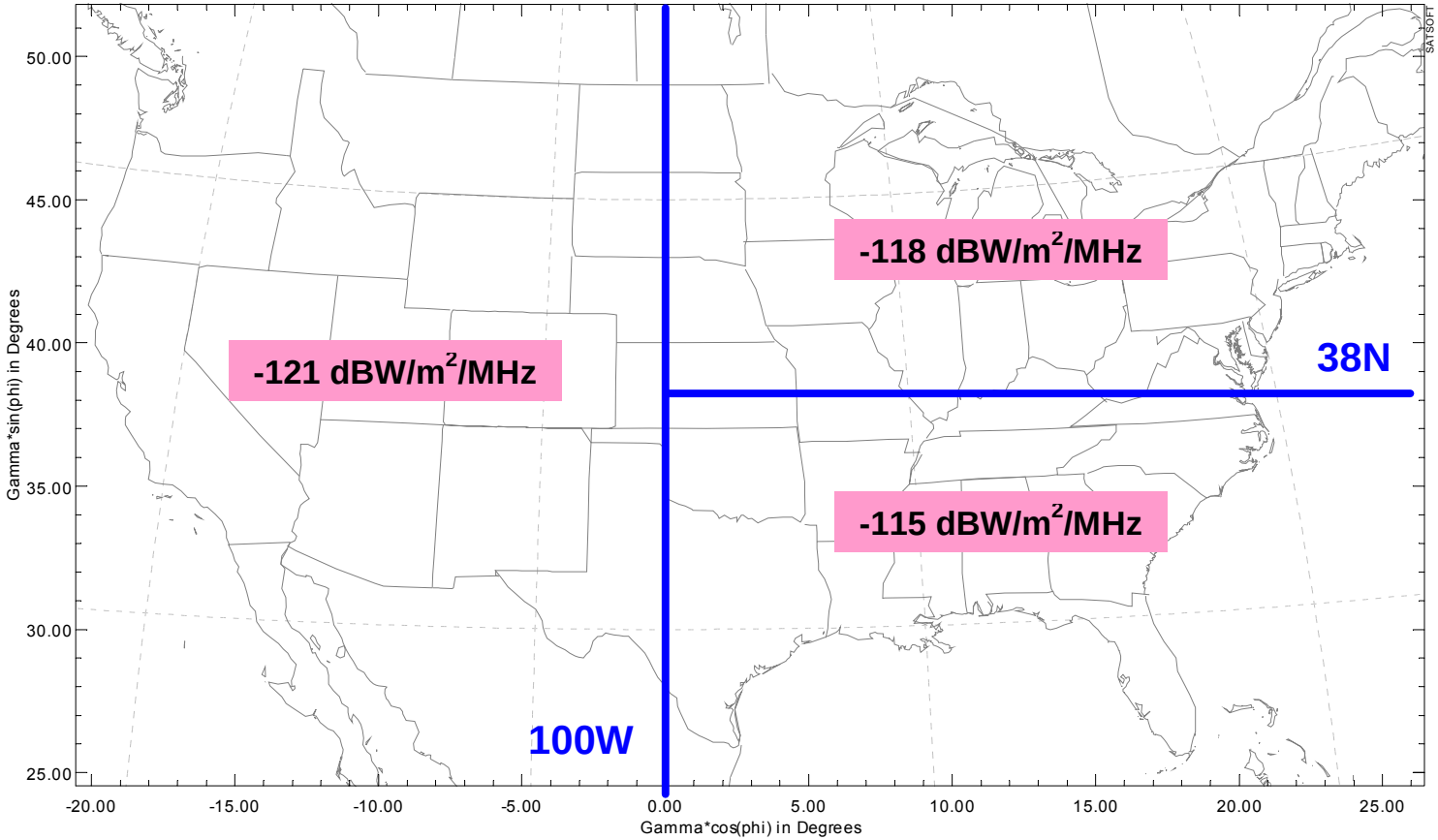
Example PFD Limits for 4 Degree Spacing Case



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Flexibility Within CONUS Arc

- Licensee may deviate from nominal orbital locations in the CONUS arc provided:
  - Maximum deviation is ±0.5° from the nominal positions in the CONUS arc table
  - Resulting nominal separation is not less than 3.8° from neighboring nominal orbital position given in the CONUS arc table
  - Adjusts downlink PFD to be compliant with PFD formulae, assuming neighboring satellite is located at the nominal orbital position given in CONUS arc table
  - Accepts any additional interference resulting from move of licensee's own orbital position

Summary

- The commenting FCC applicants in the 17/24 GHz BSS band have reached agreement on major rulemaking issues:
  - Orbital positions within the CONUS arc with flexibility to adjust these positions based on PFD rule
  - General rules for authorizing orbital locations inside and outside of the CONUS arc
  - PFD coordination triggers as a function of orbital spacing
- This should permit rapid completion of the FCC rulemaking and immediate licensing of applicants in the CONUS arc

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